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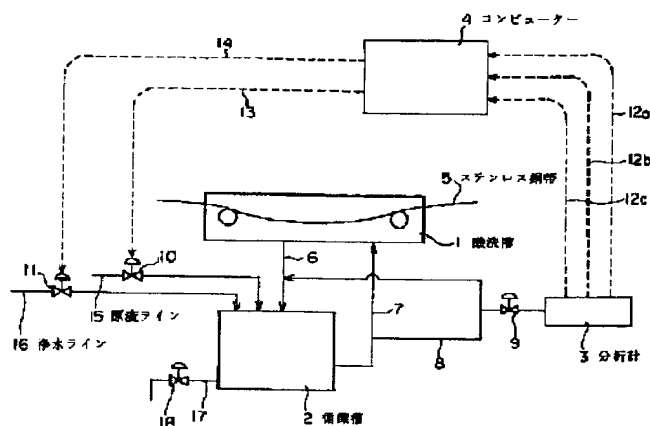
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TITLE : ANALYSIS OF MIXED ACID AND
CONTROL OF PICKLING SOLUTION



ABSTRACT : PURPOSE: To accurately measure the concns. of free hydrofluoric acid, free nitric acid and iron ion in a mixed acid by measuring the concn. of iron ion by an iron salicylate complex absorptiometric method and measuring the concn. of free hydrofluoric acid by an iron acetylacetone complex fading absorptiometric method and measuring the total concn. of free acids by a neutralizing titration method.

CONSTITUTION: A pickling soln. is sent to an analyzer 3 as a sample through the sample line 8 branched on the way of a line 7 and a valve 9. In the analyzer 3, the concn. of iron ion is measured by the iron salicylate complex absorptiometric method and the concn. of free hydrofluoric acid is measured by the iron acetylacetone complex fading absorptiometric method and the total concn. of free acids is measured by the neutralizing titration method and the concn. of free hydrofluoric acid is subtracted from the total concn. of free acids to measure the concn. of free nitric acid. The signals correlated to the concn. of iron ion, the concn. of free hydrofluoric acid and the concn. of free nitric acid are inputted to a computer 4 as input signals 12a, 12b, 12c. The opening and closing of the valve 10 of a raw soln. line 15 and that of the computer 4 so as to hold the respective concns. of the pickling soln. within a tolerance range.

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